R E P O R T R E S U M E S

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A COORDINATING UNIT FOR RESEARCH AND CURRICULUM DEVELOPMENT IN VOCATIONAL AND TECHNICAL EDUCATION.

BY- STEPHENS, JOHN F.
UTAH STATE BOARD FOR VOCAT. EDUC., SALT LAKE CITY

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ACTIVITIES OF THE UTAH RESEARCH COORDINATING UNIT IN VOCATIONAL AND TECHNICAL EDUCATION, DURING ITS FIRST 16 MONTHS OF OPERATION, WERE DESCRIBED. THE MOST SIGNIFICANT OUTCOMES OF THE UNIT'S VARIED EFFORTS WERE (1) DEVELOPING WITHIN THE UTAH STATE BOARD OF EDUCATION AN AWARENESS OF THE POTENTIAL VALUE OF RESEARCH TO VOCATIONAL AND TECHNICAL EDUCATION, (2) RENDERING STATEWIDE ASSISTANCE TO PUBLIC SCHOOL VOCATIONAL EDUCATION PERSONNEL IN THE DESIGN AND CONDUCT OF RESEARCH PROJECTS, (3) ESTABLISHING A RESEARCH COMMUNICATIONS CHANNEL BETWEEN THE COLLEGES AND THE PUBLIC SCHOOLS THROUGHOUT THE STATE, (4) ASSISTING IN THE PREPARATION OF VOCATIONAL EDUCATION RESEARCH PROPOSALS FOR FEDERALLY FUNDED PROJECTS, (5) CONDUCTING STATE AND REGIONAL VOCATIONAL RESEARCH WORKSHOPS, (6) INITIATING A PROCEDURE FOR DISTRIBUTION OF VOCATIONAL RESEARCH INFORMATION WITHIN THE STATE, AND (7) FURTHER IDENTIFYING RESEARCHABLE VOCATIONAL AND TECHNICAL EDUCATION PROBLEMS IN THE STATE. (JH)

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FINAL REPORT OF PROJECT OE-5-85-133

Project No. 5-0135

Title of Project: A Coordinating Unit for Research and Curriculum Development in Vocational and Technical Education

Author and Principal Investigator:

John F. Stephens

John F. Stephens, Director
Utah Research Coordinating Unit
Office, Utah State Board for Vocational Education, 1400 University Club Building
Salt Lake City, Utah 84111

Approved by:

T. H. Bell

T. H. Bell, Superintendent
Utah State Department of Public Instruction

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S U M M A R Y

The Utah Research Coordinating Unit (RCU) for Vocational and Technical Education was funded and operated under its original contract from 1 June 1965 until 30 November 1966. The RCU was comprised of four principal members who were recruited and present for duty by 1 August 1965. These four were located, one each, at the Office, Utah State Board of Education; the University of Utah; Utah State University; and the Salt Lake Trade Technical Institute.

The RCU began to lay the groundwork for a lasting vocational and technical education research effort in Utah. Among its accomplishments can be counted:

Orientation of public school personnel on the importance of research to vocational and technical education programs.

Successfully conducted workshops on research design.

Dissemination of research information.

Provision of consultant service and other research assistance.

Definition of researchable vocational education problems.

Preparation and submission of proposals to the U. S. Office of Education.

FINAL REPORT OF PROJECT OE-5-85-133

Background

Vocational and technical education is expanding rapidly. More and more course offerings are being included in the curricula of the schools of the various states. The requirement for skills and technical training continues to increase.

Even though the Vocational Education Act of 1963 encourages research in vocational and technical education by authorizing funds for such use, a large number of states failed to initiate aggressive vocational and technical education research programs. In an attempt to overcome this deficiency, and to encourage states to gradually assume local leadership in vocational education research, the U.S. Office of Education invited proposals for the establishment of Research Coordinating Units for Vocational and Technical Education in each state.

The Utah State Board of Education submitted a proposal for the formation of a Research Coordinating Unit (RCU) for Vocational and Technical Education; the proposal was ultimately approved and funded for $79,871.00, and the RCU became active about the beginning of August 1965.

Missions of the RCU

The missions of the Utah RCU are listed below:

A. To objectively arrive at the vocational training needs of Utah's youth at the high school and post-high school levels.

B. To evaluate the training needs of the academically and socio-economically disadvantaged youth and adults in the State.

C. To survey the training needs of workers in terms of skills and abilities so that training programs may be established to adequately meet the requirements for specific jobs or for job fields.

D. To fill an existing void and meet the needs of coordination of effort between educational and training institutions and the world of gainful employment in the matter of appropriate research by respective agencies.

E. To provide leadership in identifying the researchable problems of vocational and technical education and assist in the development of appropriate projects.

F. To encourage all agencies concerned to be engaged in research efforts related to their respective spheres of operation, but also to coordinate those efforts with other agencies when deemed prudent.

G. To assist in the evaluation of research efforts.

H. To assist in the dissemination on the findings of completed research.

I. To assist in the implementation of research efforts undertaken by such agencies.

J. To reduce the possibility of unnecessary duplication of research efforts by the respective agencies.

Organization

The Utah Research Coordinating Unit consisted of four professional members: Director Norman F. Hyatt, and Associate Directors Austin G. Loveless, John F. Stephens, and Sandra A. Noall. Each was selected to specialize in a particular area: Dr. Hyatt, administration and liaison between vocational education research and general education research; Dr. Loveless as a vocational and technical education expert; Mr. Stephens for industry requirements and world-of-work information; Mrs. Noall for women's occupations. These categories or subject areas were never really adhered to except in women's occupations and were of little significance in the program that resulted.

The professional staff was supplemented upon occasion by graduate research and by clerical assistants. Consultants were available as required (within funding levels). A strength accounting diagram is attached at Appendix A.

The four primary members of the RCU were located at four different sites. The Director maintained his office in the office of the State Superintendent of Public Instruction to facilitate communications with the State Administrators for Vocational Education and for Research and Planning, and with the State Vocational Education Specialists.

Sandra Noall, Austin Loveless, and John Stephens were located at the Salt Lake Trade Technical Institute, Utah State University, and the University of Utah, respectively. This dispersion of the primary RCU staff was done purposely for the following reasons:

> First, by locating staff members in various institutions, a wider circle of acquaintances was assured; second, recruiting staff members was made easier; and third, matching funds were spread over a relatively large number of agencies so that the funds, facilities and services that a particular agency contributed were minimal.

The chain of command in existence during the contract period extended from the State Superintendent of Public Instruction; to the Administrator for Research and Planning, and the Administrator for Vocational Education; to the Director of the RCU; and to the Associate Directors of the RCU. The Institutions at which the Associate Directors were housed, were not in the chain of command, although close coordination was effected.

A thirteen-man Advisory Committee was formed of leading representatives of business, labor, government, higher education institutions, and agriculture. This Committee served to suggest areas in need of research, to constitute points of contact in important areas of the population, and to act as a "sounding board" for research efforts in progress.

Funding

The Department of Health, Education, and Welfare in letter Contract Number OE-5-85-133, effective 1 June 1965, approved $79,871.00 for the operation of the Utah Research Coordinating Unit from 1 June 1965 to 30 November 1966.

The Salt Lake Trade Technical Institute, Utah State University, and the University of Utah by Memorandum Agreement with the Utah State Board of Education each agreed to provide office space plus certain administrative support to one RCU staff member. These institutions charged no administrative overhead against the RCU account.

A final financial statement will be submitted under separate cover prior to March 1967.

Accomplishment of Missions

Shortly after its organization, the RCU staff members met in conference to decide on the approach to be used in accomplishing its missions, and to establish priorities of effort. The results of this meeting, as modified by frequent subsequent meetings, resulted in the program described below which was actually undertaken by the RCU during its first contract period.

Emphasizing the Importance of Research in Vocational and Technical Education and Publicizing the RCU and Its Purposes

The first few months after its establishment, the RCU directed its major effort toward self-education, and planning a program for the future months. It was apparent that initial emphasis had to be given to:

a. Measuring the "research attitude" among vocational educators in the State.

b. Emphasizing the importance of research as a foundation for the rapidly expanding vocational and technical offerings.

c. Conducting an orientation program on the organization and functions of the RCU.

It was decided that a series of ten regional briefings would be scheduled during September and October 1965 to blanket every section of the State. The briefings would be scheduled for late afternoon and would last no more than two hours. Each briefing would consist of a forty-minute lecture, followed by a forty-minute skit, and concluded by a question-and-answer period. The skit was written by members of the RCU using a "family-tree" approach to insure that all desired subjects were included in the presentation. The skit was cast against the background of an RCU meeting called to consider a hypothetical research proposal which had been submitted for indorsement and forwarding to the U. S. Office of Education.

The briefing tour revealed that the average Utah public school administrator and vocational education teacher:

a. Didn't associate research with vocational and technical education.

b. Had little research experience and would need assistance in planning a vocational research program.

c. Was interested in vocational and technical education, and eager for its continued growth and improvement.

d. Did not relate research to his own job, and felt too busy to participate.

e. Was interested in learning what assistance could be provided by the RCU which would permit research, the results of which would improve a local problem.

f. Was acquainted with many local vocational problems in need of scientific solution.

The briefing tour also produced a list of attendees which served as an initial mailing list for a monthly vocational research newsletter. The attendees were subsequently asked to recommend vocational and technical education areas in need of research. More than fifty suggestions were received, some of which led to research proposals and some directly to locally funded research programs.

Identification of Experienced In-State Education Research Personnel

The regional briefing tour affirmed that the public school administrators and vocational teachers who are familiar with problems, had little time for, or experience in, educational research. Therefore, it became apparent that if more research is to be conducted in the public schools of the State, then experienced personnel must be identified or trained and made available for at least the design of the program, if not for the conduct of the project. This identification of research personnel became the next major effort of the RCU.

In 1965, the trade technical institutes, junior colleges and colleges of Utah had a few personnel with research experience, usually obtained in Ed.D. or Ph.D programs, but very few of these qualified persons were oriented toward vocational and technical education. The two State universities (The University of Utah and Utah State University) and the one private university (Brigham Young University) had many persons qualified by education as researchers, but only a few were actively engaged or interested in research projects in vocational and technical education. Utah State University had the largest number of non-student researchers active in vocational and technical education. Each of the universities had relatively few graduate students with dissertation or thesis subjects in the vocational and technical education area; again, Utah State University led the field.

And so it was evident that Utah had only a small number of experienced educational research personnel interested in vocational and technical education, and all of these had more work than they could handle. The question that faced the RCU was how to train more research personnel who would be active in vocational and technical education, and second, how to make more efficient use of those experienced in research who are present in the State.

Two training sessions were scheduled and conducted; both were at Utah State University, Logan, Utah, during June 1966. The first workshop was a one-week, State-funded instructional session for vocational teachers and administrators from each of Utah's forty school districts. The RCU staff, supplemented by guest lecturers from Utah State University presented instruction in the constituent parts of research design. The workshop included the actual design of an unsophisticated action research project which the participants took back to their own schools and are conducting during the 1966-1967 school year.

This State-wide project which is being conducted concerns testing the impact of utilizing vocational education teachers to supplement the vocational counselors in disseminating world-of-work information in their own specialties. Measurements are being made to see if the youth in the experimental group retain more world-of-work information than their compatriots who were not exposed to supplemental orientation. Differences in teacher attitudes will also be observed.

The second workshop was a two-week federally funded workshop which had as its theme, an interdisciplinary approach to vocational and technical education research. Twenty-three people from eight regional states attended, and nationally known speakers were brought in to make key presentations. Experience was gained in proposal preparation through the consideration of two case studies. The final report of this project (Grant No. OEG 4-6-062051-1519) has been previously submitted.

The problem of the more efficient utilization of the experienced researchers who exist in Utah was attacked through favoring the "team" approach to the conduct of research. It is too early to measure the effects of the experiments attempted in this regard, but they are described below. First the experienced researchers were cast in the role of consultants rather than as principal investigators , and paid with RCU money, and State research funds, at consultant rates. These consultants were used to advise in their specialties, the less experienced researchers who knew the problems in need of solution, and who were serving as principal investigators.

To further improve communications and cooperation, New Ideas Review Boards (NIRB's) were established in each college and university in Utah. The NIRB's are small advisory panels of experienced researchers whose services are available without charge to personnal from the public schools who wish to

discuss proposed action research projects for testing solutions to problems that exist in their schools. In addition, at the recommendation of the RCU, three-fourths of the school districts in Utah have now designated a Research Coordinator in each of their secondary schools. These Research Coordinators have the task of encouraging the teachers in their schools to define their researchable problems and to take advantage of the services of the nearby New Ideas Review Board in designing an action research project to alleviate these problems. These Research Coordinators are also used in the dissemination of the results of research programs as described in detail later.

Preparation of Proposals for Submission to the U.S. O. E.

One of the standards by which the RCU was judged by local people was the ability to submit winning research proposals for Federal funding. In fact, many people in the State understood, perhaps erroneously, that this was the primary mission of the RCU.

During the initial contract term, every research proposal submitted to the U. S. Office of Education from Utah that was concerned with vocational and technical education, was prepared with assistance provided by the RCU or was coordinated through the RCU with the State Office of Education. Thirteen proposals were submitted during the contract term of which four were approved, four disapproved, and five are still being considered.

The quality of the Utah proposals improved markedly from the beginning of the period to the end of the period. This was due to increased experience on the part of the RCU staff, the greater use of consultants, and the increased availability of graduate assistants to participate in proposal preparation.

Dissemination and Implementation of Research Results

A matter that has been of continuous concern to the RCU is the fact that the design of a research project seldom gives sufficient emphasis to planning the utilization of its results, thus permitting the value of a project to go unrealized. The RCU emphasized throughout the contract period that research design must include detailed planning for the utilization of its results. Eventually, an integrated research plan must be prepared which is based on a long-range State plan for vocational education. When such a research plan is brought into existence, it will be apparent the part that individual research programs play (or don't play), and a reasonable basis will be available to determine need for funding support.

In November 1966, the State Administrator for Vocational Education requested participation by the RCU in the preparation of a long-range vocational plan and a master blueprint for research to support this plan. In the opinion of the RCU this may well be the most important document, from the vocational research point of view, ever formulated by the State.

The problem of appropriate dissemination of vocational research information has been attacked by the Utah RCU in two ways. First, a monthly newsletter, "RESEARCH RAMBLINGS" was initiated and distributed widely within the State. This periodical attempted to arouse and sustain interest in vocational research by listing research design hints, and by describing research programs proposed or in progress. A questionnaire after one year's distribution of the RAMBLINGS was answered by approximately 30% of the recipients and indicated moderate interest in the periodical.

A more intense effort to disseminate information about vocational education research was begun in September, 1966. Each week the RCU mails abstracts of five research programs to the Research Coordinators in Utah's public schools

and to the Chairmen of the New Ideas Review Boards at each college and university. The Research Coordinator makes the appropriate internal distribution within his own school. By sending only a few short abstracts each week, it is hoped that the Research Coordinator will find time to read each of them.

Conclusions

Trying to assess the results of the first sixteen months of operation of the Utah RCU is difficult because many of the RCU activities will not bear fruit until sometime in the future. Certain results can be measured, however, and these are listed below:

a. The Vocational Division of the Utah State Board of Education became more aware of the potential value of research to vocational and technical education. This may well be the most significant accomplishment of the RCU during its first contract period.

b. Public school vocational education personnel throughout the State are thinking and talking research to a greater extent than before. Assistance had been rendered by the RCU in the design and conduct of research projects.

c. A research communications channel between the colleges and the public schools has been established throughout the State to assist in the design of solutions to problems encountered by vocational education teachers.

d. Experience has been gained in the preparation of research proposals, and a greater number of proposals were submitted and federally funded during the past 16 months than would have been the case without the efforts of the RCU.

e. The conduct of State and regional vocational research workshops by the RCU has provided instruction to a greater number of educators in Utah than would otherwise be the case.

f. A system has been initiated and a procedure inaugurated for the distribution of vocational research information within the State.

g. Researchable vocational and technical education problems in the State have been further identified.